

AMENDMENTS TO THE CLAIMS

1-6. (Cancelled)

7. (Currently Amended) A remaining recordable time calculation apparatus ~~that calculates for calculating a remaining~~ recordable time of a recording medium, the recording medium containing one or more video streams and corresponding management information, and the one or more video streams being compressed when recorded on the recording medium, ~~the said~~ remaining recordable time calculation apparatus comprising:
management data read means for reading, from the recording medium, a running time of the one or more video streams;

total time holding means for holding a total time period for which recording is possible on the recording medium, ~~hereinafter referred to as 'the total time', wherein the total time period for which recording is possible is being~~ obtained by first subtracting an estimate error value from a capacity of the recording medium; and then by dividing the subtraction result by a standard bit rate, ~~wherein an the~~ estimate error value ~~estimating estimates~~ at least one of: an estimate error occurring during compression of a video stream; and a size of an unrecordable area inherent in the recording medium, and the standard bit rate is a bit rate used in compressing a video stream to be recorded on the recording medium; and

time calculation means for calculating the remaining recordable time by subtracting the running time of the one or more video streams read by said management data read means from the total time period for which recording is possible.

8. (Currently Amended) The remaining recordable time calculation apparatus of claim 7, further comprising display means for displaying the remaining recordable time calculated by ~~the said~~ time calculation means,

wherein ~~the said~~ display means displays a ratio of the remaining recordable time calculated by ~~the said~~ time calculation means, to the total time period for which recording is possible in a graphical form.

9. (Currently Amended) The remaining recordable time calculation apparatus of claim 7, further comprising:

instruction receiving means for receiving a user selection of a video stream out of the one or more video streams;; and

display means for displaying the remaining recordable time calculated by ~~the~~ said time calculation means;;

wherein ~~the~~ said display means displays a ratio of the running time of the selected video stream to the total time period for which recording is possible in a graphical form.

10. (Currently Amended) The remaining recordable time calculation apparatus of claim 9, further comprising stream decoding means for decoding a compressed data of the video stream,

wherein ~~the~~ said display means further displays an image of the video stream decoded by ~~the~~ said stream decoding means.

11. (Currently Amended) The remaining recordable time calculation apparatus of claim 7, wherein:

~~wherein the~~ said management data read means further reads compression bit rates recorded in a one to one relation with the running time of each of the one or more video streams;; and

~~and wherein the~~ said time calculation means obtains the remaining recordable time by subtracting an adjusted running time of each of the one or more video streams from the total time period for which recording is possible, the adjusted running time being adjusted according to a ratio of the compression bit rates to the standard bit rate.

12. (Currently Amended) The remaining recordable time calculation apparatus of claim 11, further comprising ~~a~~ management data write means for writing a running time of a video stream to be added and a corresponding compression bit rate to the recording medium as the management data,

wherein ~~the~~ said management data read means reads out the running time of the video stream and the corresponding compression bit rate written by ~~the~~ said management data write means.

13. (Previously Presented) The remaining recordable time calculation apparatus of claim 7, wherein the running time of the video stream is included in management information generated in accordance with a recording standard of the recording medium.

14-20. (Cancelled)

21. (New) A remaining recordable time calculation apparatus for calculating a remaining recordable time of a recording medium, the recording medium containing one or more video streams and corresponding management information, and the one or more video streams being compressed when recorded on the recording medium, said remaining recordable time calculation apparatus comprising:

a management data read unit operable to read, from the recording medium, a running time of the one or more video streams;

a total time holding unit operable to hold a total time period for which recording is possible on the recording medium, wherein the total time period for which recording is possible is obtained by first subtracting an estimate error value from a capacity of the recording medium and then by dividing the subtraction result by a standard bit rate, the estimate error value estimates at least one of an estimate error occurring during compression of a video stream and a size of an unrecordable area inherent in the recording medium, and the standard bit rate is a bit rate used in compressing a video stream to be recorded on the recording medium; and

a time calculation unit operable to calculate the remaining recordable time by subtracting the running time of the one or more video streams read by said management data read unit from the total time period for which recording is possible.

22. (New) The remaining recordable time calculation apparatus of claim 21, further comprising a display unit operable to display the remaining recordable time calculated by said time calculation unit,

wherein said display unit is operable to display a ratio of the remaining recordable time calculated by said time calculation unit, to the total time period for which recording is possible in a graphical form.

23. (New) The remaining recordable time calculation apparatus of claim 21, further comprising:

an instruction receiving unit operable to receive a user selection of a video stream out of the one or more video streams; and

a display unit operable to display the remaining recordable time calculated by said time calculation unit;

wherein said display unit is operable to display a ratio of the running time of the selected video stream to the total time period for which recording is possible in a graphical form.

24. (New) The remaining recordable time calculation apparatus of claim 23, further comprising a stream decoding unit operable to decode a compressed data of the video stream,

wherein said display unit is further operable to display an image of the video stream decoded by said stream decoding unit.

25. (New) The remaining recordable time calculation apparatus of claim 21, wherein:

said management data read unit is further operable to read compression bit rates recorded in a one to one relation with the running time of each of the one or more video streams; and

said time calculation unit is operable to obtain the remaining recordable time by subtracting an adjusted running time of each of the one or more video streams from the total time period for which recording is possible, the adjusted running time being adjusted according to a ratio of the compression bit rates to the standard bit rate.

26. (New) The remaining recordable time calculation apparatus of claim 25, further comprising a management data write unit operable to write a running time of a video stream to be added and a corresponding compression bit rate to the recording medium as the management data,

wherein said management data read unit is operable to read out the running time of the video stream and the corresponding compression bit rate written by said management data write unit.

27. (New) The remaining recordable time calculation apparatus of claim 21, wherein the running time of the video stream is included in management information generated in accordance with a recording standard of the recording medium.